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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,177	03/11/2002	Harald Martin	P21938	4569

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EXAMINER	
BHAT, NINA NMN	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/030,177	MARTIN ET AL.	
	Examiner	Art Unit	
	N. Bhat	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's request for restarting the time period in the letter of March 23, 2006 is accepted and the PTOL-892 and the patent number for Bishop et al. will be listed in the Final Rejection. Applicant's time for response will be from the mailing date of this supplemental Final Rejection.

2. Applicant's arguments of 12-12-2005 have been fully and carefully considered. Applicant's amendments to the claims and arguments are persuasive with respect to the anticipatory and obviousness rejection made over Rotter. Accordingly the rejection has been withdrawn. Upon updating the search, a new reference has been found and new grounds of rejections necessitated by amendment follows:

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 15-16, 18-20 and 26-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Bishop et al. US Patent 5,851,246

Bishop et al. teach a rotatable horizontal reactor which includes a auger or a stationary horizontal reactor which includes an auger disposed centrally through the reactor and includes a burner and an oxygen containing gas supply to introduce a controlled supply of oxygen into the reactor, the device reactor is capable of cracking hydrocarbons. [Note Column 3, lines 28-50]. Specifically the raw material is force fed into the gasification reactor by auger which is of standard commercial design and

construction, the diameter, length and taper of the extrusion tube from the auger into the reactor, and the positioning and clearance between the extrusion tube and the rotating reactor are determined by practice and use of the reactor. There is included a seal for and the feed end of the reactor.[Note Column 4,lines 5-55]. Also included is secondary air/oxygen injectors located in the hot gas discharge hood or at the end of the reactor opposite the feed entrance. Also included are means for treating the gasified material by including scrubbers and cyclones for removing dust and for cleaning the gas after gasification of the feed stream. [Note Column 4, line 58-67] The reactor is of double walled construction as seen from the drawing and further includes a refractory lining. [Note Column 7, et seq.] The apparatus of Bishop et al. USP 5,851,246 fully anticipates applicant's invention as claimed.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-14, 17 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop et al. US Patent 5,851,246

Bishop et al. teach the invention substantially as claimed. Bishop et al. teach an apparatus which takes waste material which is gasified to recover material from the gasified waste which includes introducing the waste material into the reactor, providing a discharged opening for the exhaust gas solid mixture on the end opposite the end of the reactor where feed is introduced, the sis included a shaft, and an oxygen containing a gas supply which supplies a controlled amount of oxygen gas into the gasification reactor is capable of cracking the hydrocarbon gas and further includes a discharge end for collection solids as well as the exhaust gas from the reactor. The reactor is a horizontally disposed reactor and can either rotate and include and auger disposed into the reactor, or can be a horizontal fixed reactor having an auger including paddles to move the waste material during gasification.[Note Column 3, lines 8-50] The apparatus as claimed is capable to performing applicant's method as claimed.

However, Bishop et al. does not disclose the moisture content of the feed material nor the energy requirement as claimed by applicant, nor applicant's specifics regarding the transport speed of the feed material into the reactor or design specifics regarding the auger and paddle design used in the reactor. Bishop et al. teaches using an auger which is introduced in a rotatable horizontal reactor as well as can be used in a fixed horizontal reactor, the auger as described by Bishop et al. would be disposed centrally in the reactor. The type of auger and the movement of the feed through the reactor taught by Bishop et al. is by "appropriate means such as by a method of

extrusion in the gasification reactor by an auger which is standard commercial design".[Note Column 4,line 10 et seq] Bishop et al. teach one having ordinary skill in the art how one would choose the auger as well as the seals used etc. in combination with the gasification reactor. With respect to the applicant's limitations recited in claims 21-24, regarding the auger and shaft and pitch, these limitations would have been obvious design choice limitations which one having ordinary skill in the art would recognize and has been discussed by Bishop but regarding the horizontal rotatable reactor which is not only rotated about its axis but also pitched. Bishop et al. taught using a stationary reactor and an auger disposed horizontally in the reactor and to include the paddles and pitch etc. to provide movement through the reactor for efficient reaction would have been obvious in light of the teachings of Bishop et al. With respect to applicant's energy requirements, this would have been obvious as the reactor can be run such that the energy requirements as claimed by applicant are satisfied because there is control of the burner, control of the oxygen and control of temperature in the reactor of Bishop et al. thus rendering applicant's invention as a whole obvious to one having ordinary skill in the art at the time the invention was made.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Broodman teach a tube for a cracking plant. Maton teach a gasification reactor apparatus. Nagai et al. teach an apparatus for thermally decomposing plastics into oil by thermal decomposition.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. Bhat
Primary Examiner
Art Unit 1764